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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,592	10/01/2003	Ronald L. Brookshire	1088.007	7973

7590

09/22/2004

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EXAMINER
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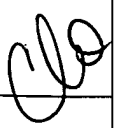
COCKS, JOSIAH C

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/676,592	Applicant(s) BROOKSHIRE ET AL.	
	Examiner Josiah Cocks	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Drawings*

1. The drawings filed 10/1/2003 are accepted by the examiner.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,610,622 to Quinell ("Quinell") in view of U.S. Patent No. 3,822,985 to Straitz, III ("Straitz '985") and U.S. Patent No. 4,392,816 to Berlie et al. ("Berlie").

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Quinell discloses in the Figure a flare gas burner similar to that described in applicant's claims 1-19. In particular, Quinell discloses a shroud (44), a waste gas riser (10) defining a passageway, a pipe (16) mounted in communication with the passageway, and multiple flow alteration assemblies, one in the form of deflector (42) and the other shown as a "pressure and flow control" in the Figure.

Quinell does not disclose plural non-straight pipes mounted in communication with the passageway or that the first flow alteration assembly includes moveable louvers.

Straitz '985 teaches a waste gas burner analogous to that of Quinell. In Straitz '985, a plurality of gas delivery pipes are present that are non-straight for the purpose of creating a swirling flow of the burning gases (see item 35 and Fig. 2 and col. 3, lines 31-34). It would have been obvious to a person of ordinary skill in the art to modify the delivery pipes of Quinell to incorporate the plural non-straight pipes of Straitz '985 as the swirling flow produced by the pipes produces smokeless operation (see Straitz '985, col. 4, lines 7-9).

Berlie also teaches a waste gas burner analogous to that of Quinell. In Berlie a flow alteration device is in the form of movable louvers/vanes (17) that are arranged to provide sufficient air flow based on the waste gas flow (see Berlie, col. 3, lines 10-12 and 59-64). It would be inherent in the disclosure of Berlie that these controllable vanes would have a member extending outside the shroud in order to control their position. It would be obvious to a person of ordinary skill in the art to modify Quinell to incorporate the moveable louvers of Berlie to desirably adjust the air flow based on the waste gas flow to ensure that all the waste gas is consumed (see Berlie, col. 3, lines 22-26).

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In regard to the recitation of the claims that the type of gas being burned is methane, it is well known in the art that methane is a type of gas burner in waste gas flares. Support for this assertion is found in the paragraph spanning columns 3 and 4 of Berlie, which recites that methane is contemplated as being a waste gas burned in a flare of this type. Therefore, a person of ordinary skill in would recognized that methane may be burned in the waste gas burner of Quinell.

In regard to the limitations of the claims concerning the number of pipes, and the angle of these pipes, to have selected the specific values recited in applicant's claims would be simply a matter of optimizing the number and angle of the pipes present in Straitz and would be obtainable through routine experimentation. See MPEP § 2144.05(II)(A). Accordingly, these limitations are not considered to patentably distinguish applicant's invention.

### ***Conclusion***

5. This action is made non-final. A THREE month shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) months from the mailing date of this communication.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents to Straitz ('471), Zink et al., Eden, Stephens et al. and German Patent No. 32 00 395 are included to further show the state of the art concerning waste gas burners.

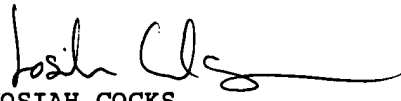
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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (703) 305-0450. The examiner can normally be reached on weekdays from 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (703) 308-1935. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

jcc  
September 20, 2004

  
JOSIAH COCKS  
PRIMARY EXAMINER  
ART UNIT 3749